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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,630	02/11/2002	Douglas N. Kimelman	YOR920020023	4522

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Casey August
Intellectual Property Law Dept.
IBM Corporation
P.O. Box 218
Yorktown Heights, NY 10598

EXAMINER	
MITCHELL, JASON D	

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,630	KIMELMAN ET AL.	
	Examiner	Art Unit	
	Jason Mitchell	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application claims priority to provisional application 60/267,573 filed on 2/9/01.

This action is in response to remarks filed on 8/24/05.

At Applicant's request, claims 1, 3, and 5 have been amended; and claims 12 and 13 have been added. Claims 1-13 are pending in this application.

Response to Arguments

Applicant's statement regarding the co-ownership of the instant applicant and the Bates reference was insufficient to invalidate the reference.

In the last full paragraph on pg. 5 Applicant states:

> Bates was owned by the same person (International Business Machines) that the present application.

This statement is insufficient to invalidate the reference. A successful statement will indicate that the Bates reference and the instant application were co-owned "at the time the claimed invention was made".

Applicant's arguments on pp. 5-6 regarding the 35 USC 103(a) rejection of claims 1-11 as unpatentable over Raverdy in view of Blake have been fully considered but are not persuasive.

In the paragraph bridging pp. 5 and 6 Applicant states:

> Raverdy is not even relevant because it does not calculate the cost of each alternative implementation of the component, as required by all of the claims at issue.

Examiner respectfully disagrees. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant goes on to state:

> With respect to claim 1, the office action admits that Raverdy neither teaches nor suggests the claim limitation of instrumenting but does not make the requisite showing of a teaching, motivation, or suggestion for modifying Raverdy that would establish obviousness.

Again, Examiner respectfully disagrees. As indicated below and again in the rejection of the claim Examiner has clearly made such a showing.

> It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's instrumenting and analysis techniques (col. 2, lines 45-50) in combination with Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations of a component (Raverdy col. 6, lines 14-15) having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

Applicant has not presented any arguments attacking Examiner's rationale and thus Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant goes on to state:

> Blake analyzes the execution data to determine an optimal placement order for a code segment (see col. 7, lines 47-49). However a code segment is not analogous to alternative implementations of components as claimed and the analysis of Blake is not of a cost but of the placement of the code portion. The claimed invention optimizes the selection of a component based on cost. Blake does not do that.

Examiner respectfully disagrees. Again, Applicant has attempted a piecemeal analysis of the rejection. It was Raverdy's exemplary 'three implementations' (col. 6, lines 14-15) that were mapped to Applicant's claimed 'alternative implementations of components' and not Blake's 'code segment'. Further, while it is acknowledged that 'a code segment is not analogous to alternative implementation of components', alternative code orders of a module, as taught by Blake (see col. 7, lines 47-49) are, in fact analogous to 'alternative implementations of components'. Blake's analysis of code execution data, inherently compares 'alternative code orders' in order to determine the optimal code order ('optimal placement order' col. 2, lines 44-50). Thus it can be seen that Blake's analysis is in fact of the *cost* of various code placements ('implementation of components').

For the reasons stated above the rejections of claims 1-11 as unpatentable over Raverdy in view of Blake are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,324,619 to Raverdy et al. (Raverdy) in view of US 5,752,038 to Blake et al. (Blake).

Regarding Claims 1, 5 and 9: Raverdy discloses a computer programmed method of minimizing the cost of using a component of a computer program (col. 4, lines 48-49 'steps executed on a computer system'), said method comprising the steps of; providing said component with a plurality of explicit selectable alternative implementations (col. 6, lines 14-15 'the adaptive method includes three implementations') which share a common component interface and semantics (col. 6, lines 19-21 'access to implementations are controlled by a switching software wrapper'); and selecting, at runtime, one of said plurality of explicitly selectable implementations for a subsequent at least partial run of said program (col. 6, lines 19-27 'asks the selector ... and executes the selected one of the implementations').

Raverdy does not disclose instrumenting said component or estimating costs for using each of said explicitly selectable implementations, but does disclose an 'Adaptation Manager' which determines which implementation should be used (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time') based on designer supplied 'adaptation policies' (col. 11, lines 8-11 'adaptation policies are implemented by library designers').

Blake teaches instrumenting said component (col. 2, lines 45-47 'an instrumented version of the module') to gather cost-related information (col. 2, lines 45-47 'to collect execution data') during at least a partial run of said program (col. 2, lines 45-47

'executes an instrumented version of the module') and a cost estimator for determining the cost of the application (col. 7, lines 47-49 'the optimizer program analyzes the execution data') in an analogous art for the purpose of optimizing the execution of the code (col. 2, lines 47-48 'to determine the optimal placement order for each code portion').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's instrumenting and analysis techniques (col. 2, lines 45-50) in combination with Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations of a component (Raverdy col. 6, lines 14-15) having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

Regarding Claims 2, 6 and 10: The rejections of claims 1, 5 and 9 are incorporated, respectively; further Raverdy discloses a default implementation is used during said at least partial run (col. 19, lines 64-65 'selects a first one of said plurality of first implementations by default').

Regarding Claim 3: The rejection of claim 1 is incorporated; further Raverdy discloses the selecting step is carried out by another component operable as a controller (col. 6, lines 22-27 'asks the selector which implementation it should execute').

Regarding Claim 4: The rejection of claim 1 is incorporated; further Raverdy discloses the selecting step is carried out by an application program (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time').

Regarding Claim 11: The rejection of claim 9 is incorporated; further Raverdy does not disclose said selector choosing an alternative implementation based upon said instrumentation, but does disclose an 'Adaptation Manager' which determines which implementation should be used (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time') based on designer supplied 'adaptation policies' (col. 11, lines 8-11 'adaptation policies are implemented by library designers').

Blake teaches said selector being operable to choose an alternative implementation based upon a cost measurement by said instrumentation (col. 7, lines 47-49 'the optimizer program ... determine an optimal placement order for each code portion') in an analogous art for the purpose of optimizing the execution of the code (col. 2, lines 47-48 'to determine the optimal placement').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's 'Optimizer Program' (col. 7, lines 47-49) in combination with Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

Regarding Claims 12 and 13: The rejections of claims 1 and 5 are incorporated, respectively; further Raverdy discloses providing the component with the plurality of explicit selectable implementations (col. 6, lines 14-15 'the adaptive method includes three implementations') which share a common component interface and semantics (col. 6, lines 19-21 'access to implementations are controlled by a switching software wrapper').

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Mitchell
3/7/06

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100